

Automatic Identification Systems & Mandatory Use Aboard Commercial Fishing Vessels

In less than 10 seconds the 83-foot fishing vessel STARBOUND sank, taking three of her four crewmen with her. STARBOUND was working 130 miles off the New England coast on a foggy night in 2001 when a 590-foot Russian tanker ran the fishing boat over. The Russian tanker never stopped; its crew had no idea it had hit another vessel. Unfortunately accidents like this are not uncommon. [Excerpt from SignOnSanDiego.com article “Vanished: The Mystery of the Gina Lisa – Missing at sea”]

Perhaps the outcome of the STARBOUND’s voyage off the coast of New England would have been different if they were equipped with AIS.

AIS:

Purpose

- Enhances safety by improving mariners’ situational awareness
- Improves authorities’ maritime domain awareness

Provides the User

- Near real time navigation information; such as vessel identity & type, position, course, speed, heading, dimensions, etc.
- Ship-to-ship and ship-to-shore-to-ship communication
- Ability to identify visual/radar contacts by name, bearing, & range -- No more “vessel off my port bow” radio calls, eliminating radio confusion and improving collision avoidance abilities
- Utility of sending/receiving short safety-related text messages.
- Connectivity with over 19,000 vessels in the U.S and over 60,000 world-wide.

How it Works

- Digital VHF-FM radio self-organizing local area network (imagine a party line cell phone system where all users within radio range talk to each other and know where each is).
- Data transmitted every 2, 4, 6 or 10 seconds depending on a vessel’s speed or course change; 3 minute intervals when at anchor or at speeds under 3 knots.

VMS vs. AIS

The systems are not currently compatible; they differ in purpose, communication method, & capability.

VMS is used as a fisheries management and enforcement tool and will remain so the near future.

Satellite-based, gives periodic long-range position reports, & fishing information from vessels to shore.
Information confidential to protect privacy concerns of commercial fisherman.

AIS is used as a collision avoidance and Vessel Traffic Service tool.

- Primarily VHF based, gives consistent navigation information to other AIS vessels
- Requires an external system for long-range satellite communications
- Allows vessels to be seen ship-to-ship and ship-to-shore.
- No additional communications fees like VMS.

WHY NOW?

- Marine Transportation Security Act of 2002 mandated a December 31st, 2004 deadline
- Initial AIS requirements were limited to Vessel Traffic Service areas (VTSA) and those vessels coming from abroad.
- Requirements were temporarily deferred outside VTSAs in order to seek further guidance on how to go about expansion of the requirements and obtain comment regarding the impact of AIS on 'small entities'
- Tragic events such as the collision between LEE III and ZIM MEXICO III, in 2004, and known intelligence on terrorists compels us to push forward.

COST

- Models range between \$2,500 and \$7,000
- Additional costs for installation & level of integration of AIS with other shipboard systems like radar, gyro, charting system, etc.

TIMELINE

- A firm timeline will be given when the regulations are published, but, rest assured that reasonable time will be given for purchase, installation, and use of AIS.
- The current regulations allotted 14 months for implementation.